The Evolution of Bloodless Medicine & Surgery

How Jehovah’s Witnesses Transformed Modern Medicine

Dick Verstraete, RN
Nurse Coordinator
The First Recorded Bloodless Surgery

“So Jehovah God caused the man to fall into a deep sleep, and while he was sleeping, he took one of his ribs and then closed up the flesh over its place. And Jehovah God built the rib that he had taken from the man into a woman, and he brought her to the man.”

– Genesis 2:21,22

Knowledge and Compassion Focused on You

MedStar Georgetown University Hospital
I APPRECIATE YOUR ASSISTANCE DOCTOR FROG, AND YOUR IDEA TO USE ONE OF ADAM’S RIBS TO MAKE A WOMAN, OR TO “RIB IT”, AS YOU SO CLEVERLY PUT IT, WAS SPECTACULAR.
What Defines A Bloodless Program

- There is leadership at the highest level of an institution that supports bloodless medicine and surgery.
- This leadership will be advocates for patients not accepting transfusions.
- A dedicated team will coordinate services across a wide variety of departments.
- There is an established list of physician providers who are willing to provide care without the use of blood or its components.
- Treatment protocols are established.
- Respect the rights of patients that refuse a transfusion.
Evolution of Bloodless Surgery
Dr. Denton Cooley

• Dr. Cooley began performing open heart surgery on Witness patients in the 1960’s.
• His first paper on complex coronary artery bypass surgery and Witness patients was published in 1967.
• In 1977 he published a more extensive paper examining the results of cardiac surgery in over 500 Witness patients.
• He proved that a high-risk surgery like open heart could be successfully done without blood.
The Hospital Information Desk (HID) Its Impact on the Medical Community

- For the first time there was a concentrated effort to educate the medical community about alternatives to blood transfusion.
- Development of research-based clinical strategies to care for Jehovah’s Witness patients.
- Development of evidence-based practice guidelines before it became the standard of care.
The Hospital Liaison Committee (HLC)

• An important part of the HID was the formation of the HLC in the community.

• These gentlemen work tirelessly to insure that your medical wishes are respected and you are treated with dignity when faced with a critical illness.

• These gentlemen lay the ground work for the formal implementation of Bloodless Medicine and Surgery Programs in hospitals across the country.
The Jehovah’s Witnesses’ Contribution to the Medical Literature

• Development of bloodless surgical techniques.
• Better understanding of the human body’s tolerance to profound anemia.
• A unique care model that is gradually being adapted as the “best practice”.
• Patient’s rights matter.
Successes

• Dr. Cooley took up the challenge of providing successful high-risk cardiac surgery for the Witness community. Now, most major surgical procedures can be done transfusion free: cardiac, orthopedic, gynecologic, hepatic and transplant.

• Different strategies and therapies developed which helped make bloodless surgery more successful and less risky.

• Surgical instruments have evolved which prevent blood loss from the surgical incision.
Blood vs. No Blood: What the Literature Says

A study from the Cleveland Clinic:

- Looked at outcomes after cardiac surgery in 322 Jehovah’s Witness patients matched with 332 patients who received a transfusion.
- Looked at outcomes including in-hospital mortality, 1-year survival, 20-year survival, ICU and hospital length of stay.
- Results: Witnesses had shorter ICU and hospital length of stay and higher one-year survival. All of the other outcomes were the same.
Clinical Outcomes in Patients Enrolled in a Bloodless Program

A study from Johns Hopkins:

• Study of clinical outcomes for inpatients who did not accept blood (n=294) and those who did accept blood (n=1157).

• Overall, mortality was lower in the bloodless group than in the blood group.

• Total and direct hospital costs were less in the bloodless group.
The Future

• Transfusion-free medicine is quickly becoming the best practice.
• Patient blood management will become the standard of care in medicine.
• Bloodless medicine and surgery programs will see continued growth.
“An important ethical issue is whether the pregnant woman who declines blood actually received better care. Her care is led by senior obstetricians; her delivery is as bloodless as possible; she has access to technology such as cell salvage. We argue that we should be providing this optimal level of care as standard. This would not only prove cost effective and safe, but also help preserve our dwindling stocks of donor blood.”
## Instructions of the Patient Worksheet

### Major Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasma Fractions</td>
<td>- Factor V: Protein encoded from plasma, used as a blood substitute. Often used in medications such as Baytexan and Neupogen.</td>
</tr>
<tr>
<td>White Cell Fractions</td>
<td>- Platelet Poor Plasma: Protein extracted from plasma, used to stop active bleeding. Examples: Cryoprecipitate, Fresh Frozen Plasma, Germsorbes Compresses.</td>
</tr>
<tr>
<td>Equipment and Procedures</td>
<td>- Hemodialysis: Patients’ blood is removed, filtered, and returned in a continuous process during surgery.</td>
</tr>
</tbody>
</table>

### Instructions

- Please review the instructions attached to this document.
- Patient’s Printed Name: ___________________________  
- Patient’s Signature: ___________________________  
- Date: ___________________________  
- Time: ___________________________
- Witness Printed Name: ___________________________  
- Witness Signature: ___________________________  
- Date: ___________________________  
- Time: ___________________________

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THANK YOU!